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FORCE STRUCTURE IMPLICATIONS OF START

BY

LEUTENANT COLONEL CHARLES F. FELDMAYER

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FORCE STRUCTURE IMPLICATIONS OF START

AN INDIVIDUAL STUDY PROJECT

BY

LIEUTENANT COLONEL CHARLES F. FELDMAYER

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# ABSTRACT

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The emerging Strategic Arms Reduction Talks Treaty (START) will reduce strategic nuclear weapons from 30-50 percent. The treaty will modify Soviet and American capabilities, but it will not eliminate the nuclear potential for either of the superpowers. START and arms control in general is not a panacea to remedy East-West relations; rather, arms control is one element supporting a nation's strategy and helps to define its strategic position. The primary purpose of arms control is to reduce risks and to maintain strategic stability. Strategy and arms control must be coordinated and we often link arms control proposals to force modernization plans. At the same time, the realities of political compromise may force adjustments to those plans. This paper reviews the proposed START Treaty and discusses the political setting that created the opportunity for the reductions. In addition, the study reviews the factors beyond the treaty that will make force structure decisions difficult.

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## INTRODUCTION

Arms control is a dynamic and real issue. The emerging Strategic Arms Reduction Talks (START) Treaty is the principle focus of Arms Control negotiations between the United States and the Soviet Union. This open and broad discussion with the Soviets provides a great opportunity to reduce the prospect of nuclear confrontation. This opportunity is not without its perils, and it is important to remember that Arms Control is not an end in itself. Arms control must be an element contributing to the national strategy of the United States. In that capacity any arms control agreement must enhance security and maintain a strategic position favorable to the United States. The START treaty is important because the balance of power between superpowers is at stake.

Internal and external pressures influence arms control. These same forces have shaped the arms race itself, and influence the strategic nuclear force structure of the United States. START will reduce this force, but sufficient latitude remains within the START ceilings to structure a strategic capability that is both survivable and credible. To maintain this strategic position periodic force modernization is

necessary. START gives us a window of opportunity to upgrade the strategic nuclear force and make it more survivable.



## CHAPTER I

### POLITICAL SETTING

The Strategic Arms Reduction Talks (START) will result in major reductions in offensive nuclear weapons. The keystone of our arms control negotiations with the Soviet Union is to control the size of intercontinental-range nuclear forces. The treaty includes rough limitations on Intercontinental Ballistic Missiles (ICBM), Sea Launched Ballistic Missiles (SLBM), and heavy bombers. For this reason the START treaty is significant. While each nation has its own reason for pursuing the treaty, the main purpose of START is to reduce the risk of nuclear war and enhance stability between the superpowers.<sup>1</sup> Agreements in arms control modify Soviet capabilities; they do not totally eliminate them. START is not a panacea for the problems of East-West conflict and must not become a substitute for giving the strategic nuclear force adequate attention.

The full impact of Perestroika has yet to be seen, but the new thinking put forth by Mr. Gorbachev has not altered the basic unilateral goals of the Soviet Union. The Soviet leader has more public relations appeal and finesse than his predecessors, and his approach may more effectively serve his country's objectives. First and foremost, the Soviet Union strives to weaken the cohesion of NATO. Since the end of World

War II defense of Europe against the Soviet threat has made defense of the central region of NATO a U.S. focus. Within a democratic alliance like NATO, allies will disagree. Exploiting these differences are in the best interest of the Soviet Union.

Any treaty that undermines the strategy of flexible response and reduces confidence in the extended deterrent provided by the United States is in the Soviet interest. Nuclear weapons have played a significant role in East-West relations and offset the massive Soviet conventional capability. Loss of allied confidence or loss of a credible nuclear deterrent enhances the Soviet ability to gain influence through intimidation in peace and greater freedom for conventional forces in war.<sup>2</sup>

Soviet leaders have consistently sought the withdrawal of American theater nuclear and conventional forces from Europe. In the past, threats have not succeeded to accomplish this end. U.S. presence has checked Soviet influence, but Gorbachev now wages the battle with the tactics of Madison Avenue to portray the Soviet Union as a more reasonable alternative to the U.S. This subtle approach carries over to arms control negotiation. The Soviet Union has the initiative as a result of Gorbachev's public relations successes. U.S. positions and objectives must be well planned and effectively communicated to regain the

initiative and use arms control as one element in our national security policy.<sup>3</sup>

Over the past few years Mikhail Gorbachev, general secretary of the Soviet Communist Party, has made Soviet interests more complicated by changing the emphasis of those interests with new political thinking. The new thinking has a direct impact on the Soviet approach to arms control, and some of the central values of the new approach are relevant. Key to understanding Mr. Gorbachev's new thinking as it applies to arms control are the following issues:<sup>4</sup>

Recognition of the growth of international interdependence. Cooperation is needed to resolve common problems, including, above all, avoiding nuclear war.

Rejection of the pursuit of unilateral security by the Soviet Union. Security can only be mutual in the nuclear age.

Admission that the Soviet Union has relied too heavily on military power in its dealings with other states and a call to place greater emphasis on diplomacy, negotiation, and other means to ensure Soviet security.

Harsh condemnation of nuclear deterrence. While reliance on nuclear weapons is grudgingly acknowledged to be useful in the near term, it is said to be inherently unstable and exceptionally dangerous in the long run.

The declaration that Soviet military capabilities should be maintained at the level of reasonable sufficiency in support of a military doctrine for the Soviet Union and its Warsaw Pact allies that is said to be strictly defensive. Reasonable suf-

efficiency is further defined in ways that support a policy of deep cuts in the central strategic nuclear arsenals of the superpowers while maintaining parity, and preserving the existing state of strategic stability between the superpowers.

Soviet political motivation for a START agreement stems from the economic need of Moscow to make radical changes in resource allocation, and in the realization that Soviet goals not achievable under the former tactics may well be possible now under the Gorbachev initiatives. The allocation changes will directly effect the Soviet military. In order for the Soviets to achieve world power status in more than military and space, the military cannot hope to continue using the same high percent of the gross national product. This is key if Gorbachev is to find solutions to Soviet economic woes. A completed START agreement sets the stage for a Soviet period for developing economic power and successful initiatives may well increase their political power as well.

The United States seeks to enhance its own security interests by reducing the risk of war and supporting policies that increase the credibility of deterrence. Concluding arms control treaties enhances American interests when they are aimed at reducing Soviet military superiority while maintaining sufficient nuclear and conventional forces to make forward defense and flexible response credible. The U.S. seeks arms control that strengthens alliance relations. Reductions made as

a result of arms control have been limited and even a completed START agreement gives each of the superpowers thousands of strategic nuclear weapons.

Six principles guide arms control negotiations for the United States. Arms Control is not an end in itself but rather a complementary element of national defense strategy.<sup>5</sup>

1. The United States seeks only those agreements that contribute to our security and that of our allies.

2. The United States seeks agreements which reduce arms, not simply limit their increase.

3. Achieving verifiable agreements on broad, deep and equitable reductions in offensive nuclear arms is the highest arms control priority of the United States.

4. Within the category of offensive nuclear arms, the United States gives priority to reducing the most destabilizing weapons: fast-flying, non-recallable ballistic missiles.

5. The United States also seeks equitable arms control measures in the area of nuclear testing, chemical weapons and conventional forces.

6. The United States insists on agreements that can be effectively verified and fully complied with. Arms control agreements without effective verification measures are worse than no agreements at all, as they create the possibility of Soviet unilateral advantage, and can effect U.S. and allied planning with a false sense of confidence.

Within the unilateral interests and principles of each superpower there are several mutual interests that exert great influence during the arms control process. Both the United States and the Soviet Union seek to avoid crisis and war. Economic concerns drive both nations to seek realignment of

their resources. The bilateral nuclear reductions envisioned by START will have a second order effect of actually increasing costs as the U.S. modernizes the post START force and for the Soviets as well, as they move to mobile ICBMs and a more balanced triad. In addition, verification measures will drive the cost for implementation of the START agreement even higher. Yet, each side realizes that nuclear arsenals have reached the point of diminishing returns. Additional strategic nuclear weapons do not provide a corresponding increase in survival or security since each side will deploy strategic weapons in the same general number.

Unilateral and multilateral interests motivate nations to negotiate treaties. The START agreement is no exception but stability is the catalyst for START and has generated superpower interest. START holds the potential for arms race, political, and first strike or crisis stability.<sup>6</sup> A completed START agreement will drive nuclear weapon competition in a predictable and a more stabilized direction. The improvement over the Strategic Arms Limitation Treaty (SALT II) will be considerable. SALT II actually encouraged growth in nuclear weapons by providing a limitation on launchers but not the weapons. START reverses this pattern.

START enhances political stability by creating an environment which fosters a broader Soviet-American relationship. Our experience with arms control has demonstrated the positive second order political effects. Past agreements have sustained a spirit of superpower cooperation rather than confrontation particularly in crisis management, crisis avoidance, and mutual restraint.<sup>8</sup> In addition, both the United States and the Soviet Union gain in the world political forum by taking steps to avoid war and reduce the arms race. Political stability sounds positive but within this element there is danger of complacency. Arms control can be a stabilizing force in our strategy for the present, but if it strips us of the drive to maintain defense expenditures for modernization and the ability to deploy a credible force in the future, we will be sacrificing our future deterrent for today's balanced budget.

To the Soviets, U.S. nuclear superiority was destabilizing in the early 60's, and to Americans, Soviet strategic missiles are destabilizing today. Both sides seek stability where their nuclear force is survivable and credible. Survivability is essential. The superpowers want to ensure their nuclear force can survive a first strike and retain the ability to inflict unacceptable damage on the enemy. This posture is an essential element of our policy and any future arms control agreement must ensure this capability is not lost. The ability to retaliate is

considered a stabilizing factor in superpower relationships because this ability enhances deterrence. Reductions in strategic nuclear weapons envisioned by START strengthen the U.S. deterrent by reducing the probability of a successful first strike on both sides.

The Union of Concerned Scientists view the problem of stability and deterrence as a paradox. To be effective our deterrent must remain credible, and our approach to this goal has stressed lethality and warfighting at the expense of survivability and verifiability. Modernization programs on both sides threaten the survivability of the other's forces.<sup>9</sup> This approach requires a change in traditional thought. Deterrence can no longer be seen in the one-sided U.S. view alone, but rather in the much larger scope of mutual deterrence. Decisions made which stress warfighting reduce strategic stability and one must recognize the trade off.



## CHAPTER II

### THE TREATY

While START negotiations have been in progress since 1982, the essential elements have taken shape during the last four years. In fact START could well become known as the summit treaty because major agreements were reached during the Reagan-Gorbachev meetings at Geneva, Reykjavik, Washington, and Moscow. General provisions of the emerging treaty are described in this section.

START imposes a limitation of 6,000 on the total number of nuclear weapons carried on deployed ICBM, SLBM, and nuclear carrying bombers. This limit is not absolute, but is a negotiated ceiling based on specific counting rules. Within the 6000 weapons the treaty will impose a sublimit of 4900 on the number of ICBM and SLBM reentry vehicles. Since the U.S. views these as the most destabilizing, each reentry vehicle counts against the total on a one for one basis. This provision of START would reduce the Soviet deployed weapons by more than fifty percent and the United States slightly less. In addition, the Soviets have agreed to reduce their SS 18 class missiles by fifty percent. The SS 18 class missiles are the largest

missiles employed by either superpower. These silo based missiles have over twice the throw-weight of the U.S. MX and represent the most effective Soviet weapon against hard targets.

Limiting the number of targeted missile warheads to 4900 restricts each side from developing an unconstrained high speed first strike capability. Counterforce capability is further constrained by the treaty in limiting the total number of deployed ICBM, SLBM, and heavy bombers to 1600. In addition, the Soviets have agreed to cut ballistic missile throw-weight by fifty percent to an agreed to maximum for each side. These limits enhance first strike survivability by limiting the capabilities of both superpowers to plan and conduct attacks against the other's nuclear arsenal.

While the United States views missiles as destabilizing and an ideal first strike system, long range bombers receive a more lax treatment. Ability to recall, long flight times, and Soviet national air defense systems contribute to the bomber's stabilizing aura. The Soviets agreed at Reykjavik that all gravity bombs and short range attack missiles carried on a single bomber equipped for a nuclear strategic mission would count as a single weapon against the 6,000 warhead maximum. This element of the counting rules could well encourage both sides to move toward greater emphasis on its bomber fleet. At a

minimum a completed START agreement places greater emphasis on full production of the B2 bomber.

The treaty and the counting rules will have an impact on future strategic nuclear force structure developed by the United States. Walter Slocombe, former Under-Secretary of Defense for Policy and Director of the DOD SALT Task Force prepared Table 1 as a plausible future force structure in a post START world. His table illustrates the impact of the treaty's counting rules on the actual number of weapons likely to be deployed.

Table 1  
Sample U.S. START Limited Force.<sup>10</sup>

	START COUNT WEAPONS	ESTIMATED ACTUAL WEAPONS
<b>ICBM</b>		
50 MX	500	500
300 Minuteman III	900	900
Subtotal	1,400	1,400
<b>SLBM</b>		
428 D-5 (18 SLBM)	3,424	3,424
<b>Bombers</b>		
100 B-1 (16 weapons)	100	1,600
107 B-52 (12 ALCM, 8 bombs)	1,070	2,160
Subtotal	1,170	3,760
<b>TOTAL WEAPONS</b>	<b>5,994</b>	<b>8,584</b>

The superpowers have agreed to many issues of substance, but before final agreement can occur a number of hurdles remain.

Many of these hurdles are small and insignificant, but there are several major points of disagreement which require solution before a final treaty can be signed. Linking START to the Antiballistic Missile Treaty in an effort to slow SDI, disagreements over sea and air launched cruise missiles, the future of mobile ICBMs, ICBM sublimits, and verification are major stumbling blocks to a completed treaty. These disagreements are significant since all but verification directly impact on future force structure decisions.

The Strategic Defense Initiative (SDI) is destabilizing from the Soviet viewpoint and they claim it violates the Antiballistic Missile Treaty (ABM). The U.S. position takes a more liberal interpretation of the treaty claiming the right to develop and test new technologies spinning off from the SDI research effort. The superpowers disagree on the terms of withdrawal from the ABM treaty. The treaty permits rescinding with one year's notification. Again the Soviets take a more restricted interpretation and want compliance for ten years; the U.S. agreed to seven. The degree to which SDI will remain a hurdle to a completed START agreement is unknown; however, the Soviets will attempt to delay or stop SDI and the START negotiations provide a forum to that end.

SDI is a paradox in that it represents a stumbling block to completing the treaty, yet it played a major role in the dialogue to convince the Soviets of our concern over counterforce imbalance.<sup>11</sup> SDI is a major obstacle to a START agreement and the U.S. position "absolutely rejects limitations on SDI as a pre-condition to treaty ratification".<sup>12</sup>

The Soviet Union and the United States also disagree on the limitation of Sea Launched Cruise Missiles (SLCM). The Soviets insist and the U.S. has agreed that a limitation is appropriate and that the limit would be independent of the restriction on other strategic systems. However, the degree of limitation viewed as acceptable is vastly different. The United States has the competitive edge for all cruise missiles and for this reason the Soviet Union sought severe limitations during the START negotiations. Marshal Sergei Akhromeyev, former Chief of the Soviet General Staff, insisted that the START treaty contain severe limitations on SLCMs.<sup>13</sup>

The U.S. prefers to keep SLCMs out of START completely. Unlike SDI, Sea Launched Cruise Missiles are a reality today and a number of attack submarines and surface combatants carry nuclear cruise missiles. Agreement over the number of deployed SLCMs is further complicated by the difficulty in verification, and the problems associated with distinguishing between nuclear

and conventional cruise missiles. R. James Woolsey, former Under Secretary of the Navy and delegate to the START talks sees SLCMs as an essential element in the sea leg of the Triad. SLCMs will fill the gap against those targets formerly covered by Pershing, but more significantly they provide a hedge to augment the reduction in deployed ballistic missile submarines at sea.<sup>14</sup>

The superpowers continue to disagree on the deployment of mobile missiles. The Soviet Union has deployed two mobile systems the SS-25, a single warhead model, and the SS-24 capable of carrying multiple warheads. Since these systems are already deployed the Soviets oppose the U.S. sponsored ban on mobile missiles. The U.S. position is not unanimous throughout the government and reflects our inability to develop a comprehensive strategic nuclear weapons development plan based on military, economic, and political realities. Those who seek a ban on mobile missiles point to the difficulty mobiles bring to the verification process. Funding and deployment of the Midgetman and MX missile systems would create a rough parity on mobile missiles between the U.S. and the USSR and eliminate this hurdle. The benefits of survivability gained by the mobiles enhance force credibility and the U.S. should follow the Soviet lead in developing mobile missile systems; however, U.S.

presidents have not been able to gain sufficient political support for mobile missile deployment during the past ten years.

Counting rules and range for Air Launched Cruise Missiles (ALCM) remain unresolved issues. Both parties agree to include the ALCM in the 6,000 warhead ceiling, but the issue is how do you count. The Soviet proposal charges each ALCM carrier with the maximum number of cruise missiles the aircraft is equipped to carry. They emphasize that this approach is the only method each nation can easily verify.

The U.S. rejects the Soviet approach stating that normally aircraft carry less than maximum payload; moreover, the U.S. supports establishing a set number of ALCM to count against each American and Soviet ALCM carrying aircraft regardless of the ability of the aircraft to carry more. Unlike the Soviets the U.S. does not view air launched cruise missiles as destabilizing. The American position argues that cruise missiles are slow and must pass through the sophisticated Soviet air defense system and the United States rejects a counting system which gives ALCMs the same weight as ICBMs.

The U.S. position stresses that an "attribution" rule would eliminate ALCM verification problems. The current U.S. "attribution" proposal is ten ALCM for each capable bomber. The gap between the proposals is best seen with a closer review of

the Soviet suggested count. Under their proposal U.S. B52's count as twenty-eight weapons, the B-1Bs twenty-two, yet their own BEAR H only six.<sup>15</sup> The final result of this issue has a direct impact on the on future American force structure decisions.

SALT II treated both conventional and nuclear ALCMs with a range greater than 600 kilometers as nuclear arms, and the USSR believes this protocol should remain under START. The U.S. seeks to eliminate the tie between START and conventional ALCM completely and proposes to increase the range of nuclear ALCM to greater than 1,500 kilometers. Given the debate over both air and sea cruise missiles the Soviets see them as destabilizing while the U.S. views them as increasing American flexibility.

Differing opinions over stability are at the core of the continuing discussion of ICBM warhead sublimit. The Soviet approach to arms control has historically been linked to military policy and their doctrine stresses that if you are able to deliver the first blow you have the greatest chance to maintain the upper hand. Understanding this philosophy is key to understand their dependence on land based ICBMs rather than bombers.<sup>15</sup> For the United States this philosophy coupled with the capability of large numbers of ICBMs to deliver a first



strike has motivated the U.S. to make reduction and limitation of ICBM warheads a priority.

The U.S. continues to argue for a 3,300 warhead limit for ICBMs. While informally providing assurances that they will not exceed the 3,300 limit, the Soviets oppose the American initiative. They reject the idea that one class of strategic weapons should receive more emphasis than the other. To the Soviet ICBMs are not destabilizing, but the SLBMs are the true destabilizing element. To achieve greater stability from the Soviet perspective they are prepared to agree to the 3,300 warhead limit only if it applies to both the total ICBM and SLBM force. The U.S. naturally opposes this approach. First because it views the Soviet ICBM force as the most destabilizing element in the Soviet arsenal and second because it cannot accept the loss of flexibility caused by constraints on its SLBM force.<sup>16</sup>

During the signing of the Intermediate-range Nuclear Force (INF) Treaty President Reagan referred to a Russian proverb when speaking of verification, "Doveral no proveral", trust but verify. The emphasis on verification from the highest level has become the keystone of the American approach to arms control. Secretary of State George Shultz described the verification process of the INF treaty as "child's play" when compared with the START verification requirements.<sup>17</sup>

The sheer number of details and the inherent complexity of verification make this agenda item a difficult hurdle to cross. This time we will not simply verify the destruction of a class of missiles, but will monitor compliance of the entire range of strategic nuclear systems. Satellites are capable of verifying launchers and missiles along the lines of SALT II, but warhead verification presents a far greater problem. A few of the unresolved verification problems include developing measures to verify missile warhead loads, identifying differences between conventional and nuclear cruise missiles, and counting mobile missiles. Once the initial verification is complete the problem of future monitoring and dealing with inevitable force modernization becomes the next focus for verification.

The United States government and the American people need to be certain that international agreements made for the common defense are verifiable. Some risk must be accepted; however, these risks must be balanced against a judgment of adequacy. The security of the nation depends on a verification process that precludes treaty deviations that threaten international stability and our national survival.<sup>18</sup> One problem with verification is that the United States tables issues during arms control negotiations without developing a verification process. Ambassador John Tower testified on this problem before the House Select Committee on Intelligence in November 1987.<sup>19</sup>

The START verification procedures have been agreed to in principle during the series of Reagan-Gorbachev summits. As discussed earlier problems with air and sea cruise missiles are two of many remaining issues. Sea Launched Cruise Missiles present a particular challenge and may have led Paul Nitze in April 1988 to propose that both the U.S. and the USSR eliminate them from their arsenals.<sup>20</sup> This proposal clearly simplifies the verification problem, but begs the question as to what are the main factors in building a nuclear force structure. The ability to verify is a questionable main element to that decision.

Table 2 summarizes the START imposed limitations. Future nuclear force structure decisions will begin with this framework plus some basic assumptions on the outcome of the air and sea cruise missile disagreement. The Joint Chiefs of Staff have stressed the importance of deploying the 4,900 ballistic missile warheads permitted under the treaty to ensure first strike survivability.<sup>21</sup> This warning brings up the basic issue of stability which is at the heart of arms control. Within the treaty each nation has sufficient latitude to structure its own strategic nuclear force. START contributes to future first strike stability by limiting the attack potential of the superpowers while permitting flexibility through survivable deployment.<sup>22</sup>

Table 2

Start Imposed Limitations<sup>23</sup>

Strategic nuclear delivery vehicles:		1,600
US currently deployed	1,986	
USSR currently deployed:	2,482	
Nuclear weapons carried on ICBM, SLBM, and bombers:		6,000
US currently deployed on systems:	13,000	
USSR currently deployed on systems:	10,650	
Ballistic missile warhead sublimit:		4,900
US	8000	
USSR	10000	
SS 18 class missiles		154
USSR currently deploys:	308	

### CHAPTER III

#### FORCE STRUCTURE IMPLICATIONS

A major difference between SALT II and START will be the impact of START on the strategic nuclear force structure of the United States. The SALT Treaties in reality extended a 1967 unilateral decision of the U.S. to halt the continued rapid construction of ballistic missiles into a negotiated bilateral balance of forces agreement with the Soviets.<sup>24</sup> Since the SALT Treaties reflected an increase in arms race stability and generally reflected the existing force structure of the superpowers. This did not require changes in force structure. START has other objectives and places force structure caps in gross terms on the superpowers. While these caps are prescriptive, they allow each of the superpowers the latitude to develop a strategic nuclear force within the negotiated cap. The development of this force structure and the allocation of resources among the strategic triad has serious implications to American security.

An objective of START is to strengthen first strike stability, but the START imposed reductions neither strengthen nor weaken stability. Each side will lose attack potential but

the treaty also reduces gross number of weapons available for retaliation. The deciding factor is the force structure deployed under START.<sup>25</sup> Treaty imposed limitations will force some difficult decisions to be made on the allocation of means among the strategic triad. The current budget deficit will make these decisions all the more difficult.

Several factors will impact on strategic nuclear force modernization. The first eleven factors were developed by Colin Gray to describe the driving force behind the arms race itself.<sup>26</sup> These factors are:

1. Foreign policy goals.
2. Interstate action-reaction.
3. Inter-armed service action-reaction.
4. Intra-armed service action-reaction
5. Bureaucratic politics.
6. The character of political-social systems.
7. Electoral politics.
8. Organizational momentum.
9. Technological innovation.
10. Following-on imperatives.
11. The Military-Industrial Complex.
12. Budget constraints.
13. START.

The principle security objective of the United States is, "To maintain the security of our nation and our allies...and, should deterrence fail, be prepared to repel or defeat any military attack and end the conflict on terms favorable to the United States, its interests, and its allies."<sup>27</sup> National foreign policy supports that end and begins to define the makeup

of a force structure to carry out that aim. National policy supports the strategy of deterrence. This requires that any force must be survivable and effective to ensure deterrence is not tested. The strategic force must be capable of surviving a Soviet attack and have the resiliency to effectively retaliate against the Soviet power base.<sup>28</sup> Yet, to be effective this ability must be mutual.

Our relations with the Soviets will influence the decisions we make affecting future force structure. R. James Woolsey believes this relationship is a principal reason to modernize because "the Moscow spring may be followed by a Moscow winter."<sup>29</sup> He stresses that the Russian threat will remain and this is not the time to lower our guard. The Soviet response to START will influence our modernization effort as we reevaluate our posture. This action-reaction process between the superpowers influences the nuclear force structure of both nations. Perceptions of trust, stability, and vulnerability are key to both an arms control agreement and force structure priority.

Inter and intra service rivalries will play in the force makeup decisions. START reductions will reduce the size of the nuclear pie, and while most agree that maintaining the triad is the best decision, distribution within the triad will be a

bloody battle. The Air Force and the Navy are traditional resource rivals. The Navy stresses the need for additional submarines to ensure survivability; however, the Air Force points to the need for MX given future Soviet antissubmarine capability when the navy will face a transparent ocean. Within the Air Force the debate continues over the bomber and the land based missile mix. These rivalries for resources and honest disagreement over strategic forces will play their role in shaping future nuclear forces.

Politics within the bureaucracy, the electorate, and the social system itself are factors exerting influence in this arena. The president will play a key role in winning a support base for whatever post-START force is sought. The decisions would be difficult without the complications of politics and with the current budget deficit his task may be impossible without major changes on the world scene.

All organizations suffer or benefit depending on your point of view from inertia. This organizational momentum becomes a force of its own as it conducts daily business. The Department of Defense and the services make decisions every day that will drive a post-START nuclear force. This years budget, for example, funds the sixteenth Trident submarine and additional boats are in the program. The Department of Air Force wants to



start full scale production and fielding of the B-2 bomber. The extent that these actions are carried out and dollars are invested will constrain any ideal force one may devise.

Research and development is a continuing process and as technological innovation arrives it makes sense to take advantage of new developments. Our technological position vis-a-vis the Soviets is a key factor influencing the emphasis on competitive strategies. We can not predict that a new weapon system will emerge that will alter the balance within the triad. What is important about this factor influencing a credible force is the importance of maintaining the research and development effort regardless of the decided force structure. First, because of the potential it offers and second because of the impact it has on potential adversaries. There is little doubt that the Soviets view the research effort in the United States as destabilizing.

Colin Gray discusses the influence on the arms race of follow-on imperatives and the Military Industrial Complex. Follow-on imperatives is the theory that the armed services attempt to maintain a steady flow of work for the major defense contractors.<sup>30</sup> While this theory may be argued and its value on the surface inaccurate, corporate America has a very high stake in a post-START force structure. Lobbying efforts for one

system over another do occur, and we can expect corporate interests to play a role in the congress as force structure decisions are made.

Finally the budget and the START agreement itself will have a major influence on America's nuclear deterrent. The list of factors influencing the arms race, arms control, and nuclear force structure serve to demonstrate the complexity of the decision making process. Nuclear force structure modernization has been described as "a strange kind of insurance policy where by paying the premiums you can make the catastrophe less likely."<sup>31</sup> The United States must decide which policy best serves its interests to avoid the catastrophe of nuclear war.

Former Secretary of State Henry Kissinger criticizes the START agreement as "being negotiated in a conceptual vacuum. The United States has not decided - or at least not put forward- what strategic forces it proposes to deploy under the START ceilings."<sup>32</sup> In other words it is time to fashion the insurance policy before we negotiate. Unless we fully understand what constitutes our strategic posture agreements for the sake of agreements have no substance. Arms control agreements have no enduring value unless they are related to a national strategy. The overriding aim of arms control is not arms reduction, but rather to enhance the security of our nation.<sup>33</sup> A future

strategic nuclear force must accomplish the same objective - enhanced national security.

With all the pressures on the strategic mix one can understand a tendency to maintain the triad albeit with slightly smaller numbers. This makes good sense for the present. The diversity of systems available enhance security and has led to stability particularly crisis stability. Currently, 18% of U.S. warheads are deployed on ICBMs, 42% are on SLBMs, with bombers completing the triad with 40% of the warheads.<sup>34</sup> START encourages larger bomber forces because of the counting rules, and the number of nuclear weapons carried on this leg of the triad will probably increase. However, most experts agree the relative proportion of warheads between land and sea based missiles will remain stable.

START has focused discussion on the need to make decisions now that will provide the strategic force structure for the next century. Regardless of the outcome in the START negotiations, modernization of our strategic forces is essential. Former President Reagan made this need clear in his National Security Strategy by emphasizing that, "Continued modernization of our strategic forces is essential to ensure reliable deterrence, enhance stability, and provide motivation for the Soviets to

negotiate broad, deep, equitable, and verifiable reductions in strategic arms."<sup>35</sup>

The thrust of American nuclear strategy is to convince our adversaries that it is not in their best interests to initiate a strategic nuclear conflict.<sup>36</sup> Our ability to project a strategic nuclear force that is survivable and can retaliate gives our strategy credibility; however, this credibility must be mutual to maintain stability between the superpowers. Arms Control plays an important part in this strategy by establishing agreements that drive the superpowers toward force structure changes which enhance stability.

The emerging START agreement supports American strategy, but START is not an end in itself and to maintain our strategic position, strategic nuclear force modernization must continue. The difficult balance for the United States is to recognize that strategic stability is critical in both the treaty and its future force structure. The two actions face the same litany of pressures discussed and influence decision makers in both Washington and Moscow. Mutual strategic stability will require a modernized force structure which stresses survivability and stability at the expense of lethality.

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